Michigan's *Early Childhood Standards of Quality for Prekindergarten*: Early Skills in Using Technology

Lindy Buch, Ph.D., Director
Office of Early Childhood Education & Family Services
Reneé DeMars-Johnson, M.S., Supervisor
Infant/Toddler & Family Services
Richard Lower, M.A., Supervisor
Preschool & Early Elementary Programs

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Early Childhood Standards of Quality for Prekindergarten

- Michigan State Board of Education, 2005
  - Revision of 1992 PreK-2nd Grade document
  - Building on 1986 PreK document
  - Stakeholder process

- Quality Program Standards
  - Much more than child care licensing
  - Required for funded programs

- Early Learning Expectations for Three- and Four-Year-Old Children
  - Similar to Grade Level Content Expectations (GLCE), K-8

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National Educational Technology Standards and Performance Indicators for Students*

- Creativity and innovation

- Communication and collaboration

- Research and information fluency

- Critical thinking, problem solving, and decision making

- Digital citizenship

- Technology operations and concepts

*International Society for Technology in Education, 2007

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Early Learning Expectations

- Approaches to Learning
- Social and Emotional Development
- Intellectual Development
- Language and Early Literacy Development
- Creative Development
- Physical Development and Health
- Early Learning in Mathematics
- Early Learning in Science
- Early Learning in the Social Studies
- Early Skills in Using Technology

GLCEs and Core Curriculum

- GLCEs
  - Mathematics
  - English Language Arts
  - Science
  - Social Studies
  - Physical Education
  - Health

- Core Curriculum Clusters
  - Technology K-2
  - Arts (elementary)

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Early Learning Expectations:
Early Skills in Using Technology

- Children explore and use various types of technology tools.

- Children typically:
  1. Can describe and creatively use a variety of technological tools independently or with peer or adult help.
  2. Understand that technology tools can be used throughout the day.
  3. Follow simple directions to use computers and other technology tools.

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Early Learning Expectations:
Early Skills in Using Technology

- Children can name various components of computer systems and use various input devices.

- Children typically:

    1. Can name components (e.g., screen, printer, mouse, disks, CD, keyboard).

    2. Use adaptive devices to operate a software program as necessary.

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Early Learning Expectations:
Early Skills in Using Technology

- Children work cooperatively with others while using technology tools.

- Children typically:

  1. Talk, ask questions, solve problems, and share ideas with peers and adults, when using computers and other technology tools.

  2. Work cooperatively when other children are present at the computer.

  3. Begin to state and follow rules for using the computer.

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Early Learning Expectations: Early Skills in Using Technology

- Children demonstrate responsible handling of technology equipment.

- Children typically:
  1. Can keep foreign materials (e.g., play dough, water, paint, crayons, chalk, and small toys) away from equipment surfaces and openings.
  2. Can learn to handle equipment gently to avoid dropping items.
  3. Can learn to avoid turning computers off during operation.

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# K-2 Educational Technology Standards & Expectations

- Basic operations and concepts
- Social, ethical, and human issues
- Technology productivity tools
- Technology communications tools
- Technology research tools
- Technology problem-solving and decision-making tools

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Technology Tools

- Computers
  - Installed software
  - Internet programs
- Computer peripherals
  - Printers
  - Scanners
  - Monitors/Screens
  - Keyboard, Mouse
  - Speakers
  - Game control units
- Calculators
- Video cameras
- Video/DVD playback units
  - Learning, entertainment

- Cameras (digital, Polaroid, other)
- Telephones, cell phones
- Photocopiers
- PDAs
- MP3s and ipods
- CD Player (record or tape player!)
- Recording devices (handheld or otherwise)
- Earphones
- Smart Board
- Others?

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Technology "Toys"

- Remote controlled items (vehicles, robotics)
- Voice- or sound-activated items
- Act – on items
  - e.g., push button and music plays
- Act – with items
  - Respond to visual or auditory request

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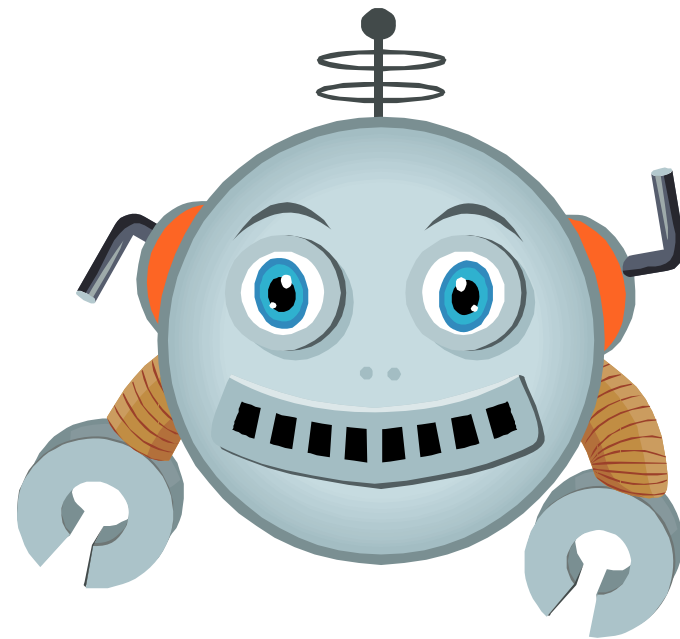
Example: Skype

- Urban and rural children meet one another in "real time"

- Follow-up picnic to play together

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Example: Recording device

- **Hand held recorder**
  - Adults document conversations
    - Adult/child reflect and revisit the conversations
    - Adult reflects & plans next steps
    - Parents have opportunity to listen, making learning more visible for them

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Example: Cameras

- Classroom documentation
- Photographic art
- Storytelling
- Portfolios

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Example: Examining devices

- Naming parts
- How does it work?
- Responsible handling

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Example: Unusual Uses

- Overhead=light box
- Storytelling on overhead film
- Science: what's opaque and what's translucent

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Consideration: Classroom Space

- **Arrangement**

- **Separate centers? Within centers?**

- **Responsible handling of technology**
  - Accessibility
  - Supervision

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Consideration: Developmental Appropriateness

- Adaptive devices for inclusion of all children
- Choosing software
- Supporting curriculum
- Philosophy

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Activity: Planning Developmentally Appropriate Activities Using Technology

- Divide into 4 groups by content area/domains

- Choose one item per category

- What technological devices or tools could be offered to help children learn this particular content?

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Contact us:

buchl@michigan.gov
demars-johnsonr@michigan.gov
lowerr@michigan.gov

(517) 373-8483

www.michigan.gov/ece

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